

language thereof. The Applicants respectfully submit that the present Amendment does not introduce new matter and does not narrow the claim scope. Thus, the Applicants respectfully submit that the rejection under 35 U.S.C. §112, second paragraph, has been overcome.

In the Office Action, the Examiner rejects claims 13-39 and 68-84 under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 5,963,966 to *Mitchell et al* in view of U.S. Patent No. 6,161,107 to *Stern*; rejects claims 1-9, 12, 40-50, 53-63, 66 and 67 under 35 U.S.C. §103(a) as obvious over *Mitchell et al* in view of U.S. Patent No. 4,918,588 to *Barrett et al*; and rejects claims 10, 11, 51, 52, 64 and 65 under 35 U.S.C. §103(a) over *Mitchell et al* in view of *Barrett et al* and further in view of *Stern*. For the reasons set forth below, the Applicants respectfully traverse all of those grounds of rejection.

Before the specific grounds of rejection over the prior art are taken up in detail, it will be helpful to review the subject matter of the present claims, both generally and as it relates to the illustrative commercial embodiments disclosed in the specification. One embodiment (claims 1-39) deals with providing a multi-page document in electronic form in such a manner that the document appears in the same format that it would have if printed. In particular, method claims 1-12 permit the provision of such a document *without an intermediary step of producing hard copies of the pages* (claim 1, step (b)). That feature permits greater efficiency in producing the document in electronic form and avoids both scanning and OCR errors and wasting paper. It is clearly different from *Mitchell et al*, which starts with hard copies and is explicitly concerned with OCR errors. Also, software to view the viewable files and to search through them in accordance with the index is provided on the

persistent storage medium.

The corresponding illustrative commercial embodiment in the specification is the electronic Yellow Pages viewer of Figs. 1-5. The Yellow Pages directory is laid out in a print composition host 203, which produces a print queue that would conventionally be sent to an image setter 205 to produce a hard copy. However, the present invention allows the production of the hard copy to be bypassed. Instead, the print queue is sent to an electronic directory packager host 211 and a converter/archiver host 217, where the printing data in the print queue are converted into electronic images of the pages as they would have appeared if printed (Fig. 1 step 111). In addition to the page images, a page/ad/heading index is formed and stored in the persistent storage 213. The page images and the page/ad/heading index are stored in persistent storage (e.g., a CD-ROM) 221, along with software to view and search through the viewable files.

A user accessing the electronic Yellow Pages viewer sees a screen such as that of Fig. 3. The user sees a page of the Yellow Pages as it would have appeared if printed, with all formatting preserved. The user can navigate in several ways. The user can select a heading, either by typing its name into the box 317 or by selecting it through the tree view 329. Alternatively, the user can enter a page number or use the back and forward buttons (equivalent to leafing through a bound Yellow Pages directory).

In short, the electronic Yellow Pages directory has the look and feel of a hard-copy Yellow Pages directory, even though no such hard-copy directory may have ever been printed. Also, since the printing data from the print queue are used to form the page images,

there are no scanning or OCR errors.

Another embodiment (claims 40-84) deals with providing a page of a multi-page document in electronic form, the page having one or more items including a selected item. Once again, method claims 40-53 permit the provision of such a page without an intermediary step of producing a hard copy of the page. Software for viewing the viewable file and to highlight the position of the selected item on the page is provided. Various options recited in the dependent claims include a reverse-side page, selectively viewing the page either with or without the selected item highlighted, and additional material such as a bill.

The corresponding illustrative commercial embodiment in the specification is the bill viewer of Figs. 6-14. The bill viewer permits the recipient of the bill (a Yellow Pages advertiser) to see the page on which the ad appears, as it would be printed, without the need actually to print the page. If the reverse-side page is also included, the advertiser can see both sides of the sheet on which the ad appears. In other words, the advertiser sees a tear sheet, which is so called because it represents the sheet as it would appear if it had been torn out of a hard-copy directory. The advertiser's ad is highlighted, and the highlighting can be turned on and off. For instance, Fig. 10 shows a page on which the advertiser's advertisement is highlighted. The bill can also be included. Thus, neither the tear sheet nor the bill need be printed in hard copy.

Claims 13-39 and 68-84 stand rejected under 35 U.S.C. §103(a) over *Mitchell et al* in view of *Stern*. According to those claims, *inter alia*, software to view the viewable files is

written on the medium. The passages cited in the Office Action for that teaching do not identify any such software written on the medium.

OmniPage is not such software, but is instead an OCR package, which serves a wholly different purpose. Also, it would have been pointless, and therefore non-obvious, to store or provide OmniPage or any part of it on the medium. While OmniPage would presumably be run from some storage, there is not even the slightest suggestion that such storage would be the medium of the present claimed invention. The Unix "grep" command is not software to view the viewable files, but is merely a text-search command. The end of the specification includes a cryptic reference to "disk and CDROM viewers (conventional word processor programs and edit/viewer utilities)," but there is no teaching or suggestion that such programs would be included on the medium. The other portions of *Mitchell et al* cited for teaching of the software instead teach various processes for indexing the OCR'd documents, not software on the medium for viewing the viewable files.

The teaching of persistence in *Stern* does not overcome that deficiency of *Mitchell et al*. Therefore, the Applicants respectfully submit that the combination of references proposed in the Office Action would not have resulted in the present claimed invention.

With regard to the typed name of the heading, as recited in claim 19, the Office Action points to Fig. 5 of *Mitchell et al*. However, that figure shows no such thing.

With regard to Java, the Office Action argues that it would have been obvious to incorporate Java as taught by *Stern* into the teachings of *Mitchell et al* "because the system architecture provides a framework for interaction between different objects over the Internet

by using HTTP Web servers and existing web browsers” and because “the technology of the JAVA language enables one to communicate with other applications over the World Wide Web.” However, the relevant consideration is not whether a modification to the prior art could have been made, but whether the references suggest the desirability of such a modification. *In re Laskowski*, 10 U.S.P.Q.2d 1397, 1398 (Fed. Cir. 1989).

In the present case, *Mitchell et al* teaches that existing Web browsers, word processor programs and edit/viewer utilities are adequate to view the online version of the document, with the result that a person having ordinary skill in the art would not have appreciated the desirability of further incorporating a device-independent language such as Java. As for “interaction between different objects over the Internet” and the ability “to communicate with other applications over the World Wide Web,” the Office Action does not explain why either of those abilities would have been desirable in connection with the online document of *Mitchell et al*, or why a person having ordinary skill in the art would have perceived any such desirability from the references.

The Office Action further cites a passage of *Mitchell et al* for the propositions that the software is written to run within a World Wide Web browser and that the distribution file of the World Wide Web browser is written on the medium. That passage of *Mitchell et al* says that a World Wide Web browser is used, but does not identify any viewing software that is written to run within such a browser and does not even remotely suggest writing the distribution file on the medium.

With regard to claims 68-84, the Office Action cites various portions of *Mitchell et al*

for teaching of a reverse side viewable file, highlighting, and viewing additional information such as a bill. However, the passages of *Mitchell et al* cited in the Office Action do not teach highlighting information representing a position of the selected item on the page, but instead only teach highlighting page numbers as they appear in text form in a search result. There is passing mention of showing words or phrases having links in reverse video, but there is no teaching of exactly how that is done; thus, there is no enabling teaching for the highlighting information, the viewable file and the software to highlight the position, as claimed. With regard to the reverse side viewable file and the bill, those features are entirely absent from *Mitchell et al*.

With regard to the additional information which is not included in the document, the Office Action points to links shown in the drawings; however, those links do not teach or even vaguely suggest a bill.

Claims 1-9, 12, 40-50 and 53-67 are rejected under 35 U.S.C. §103(a) over *Mitchell et al* in view of *Barrett et al*. On that ground of rejection, the Applicants respectfully submit the following comments in addition to those set forth above. The invention as defined in those claims includes steps of providing a print queue and converting the printing data in the print queue into a plurality of viewable files *without an intermediary step of producing hard copies of the pages*. Thus, paper is not wasted, and scanning and OCR errors are avoided.

The Office Action acknowledges that *Mitchell et al* does not teach providing a print queue or converting the printing data in the print queue into the viewable files. As for the lack of an intermediary step of producing hard copies, *Mitchell et al* does not teach that

limitation either, since that reference starts with hard copies. Instead, the Office Action cites *Barrett et al* for teaching of a print queue and argues that it would have been obvious to combine the print queue of *Barrett et al* into the technique of *Mitchell et al* "because it would allow hard copies of the electronic document to be printed." However, the whole point of the technique of *Mitchell et al* is that it starts with hard copies and converts them into an electronic document, with the consequence that the reference teaches away from the present claimed invention.

The Office Action does not explain why any additional ability to print hard copies would have been desirable or, even if it were, how the print queue of *Barrett et al* would have been integrated into *Mitchell et al* to achieve such a purpose. In fact, such desirability, even if shown in the art, would appear to teach against the claim limitation "without an intermediary step of producing hard copies of the pages." Thus, if the reading of the references in the Office Action is accepted, the references teach away from the present claimed invention.

Moreover, even if the references were combined as suggested in the Office Action, the result would not have been the present claimed invention. There is no suggestion in the references to use the print queue for any purpose other than to print hard copies of the documents. Thus, in such a combination of references, the printing data in the print queue would have been printed in hard copy, which would then have to be scanned and OCR'd to produce the electronic documents. Of course, such a combination would have been a far cry from the present claimed invention.

With regard to claim 3, the Office Action argues that in *Mitchell et al*, the data to be rasterized inherently comprise PostScript data. The Applicants respectfully submit that such is not the case. In *Mitchell et al*, the data to be rasterized are hard copies of the document to be imaged; such data do not and cannot inherently comprise PostScript data. In fact, it would be closer to the truth to say that the data in the reference inherently *do not* comprise PostScript data.

With regard to claim 42, the passage in *Mitchell et al* cited for selectively viewing the file either with or without the selected item highlighted actually teaches no such thing. All it teaches is that page numbers in the search result are highlighted.

It is believed that the above arguments suffice to rebut the Office Action and to show the patentability of the present claimed invention. However, for the sake of completeness, the additional arguments set forth on pages 16 and 17 of the Office Action will now be considered in turn.

(1) The Office Action cites the teaching of the OmniPage professional software package in *Mitchell et al*. However, OmniPage is not “software to view the viewable files and to search through the viewable files in accordance with the index.” Instead, OmniPage is an OCR software package, which serves a wholly different function. Also, the reference does not teach or even remotely suggest that OmniPage or any part of it is written on the medium, as recited, e.g., in present claim 13. In fact, there would have been no point in writing an OCR software package or any part of it on the medium of present claim 13. The teaching of indexing in Fig. 2 of *Mitchell et al* does not change any of those facts.

(2) The Applicants never argued that persistent storage was not taught. Instead, the Applicants argued (and maintain) that such a teaching in *Stern* does not overcome the deficiencies of *Mitchell et al.* The Office Action does not respond to the Applicants' position on that point.

(3) Fig. 7 of *Mitchell et al* is alleged to depict a typed name of a heading on a Web page. However, that figure shows no such thing. Instead, Fig. 7 of the reference shows a Web browser window. That Web browser window, as is common in the art, has spaces for a title and a URL for the document being viewed. However, the claim limitation in present claim 19 directed to "software to receive a typed name of a heading" is still not met. Claim 19 depends from claim 17, which recites that the document is organized under a plurality of headings and that the index associates each heading with a page on which the heading appears. In other words, in present claim 19, the software comprises software to receive a typed name of a heading from one of the headings associated in the index with pages on which the headings appear. The mere ability to type a Web URL into a browser window does not even begin to suggest such capability.

(4) The Office Action alleges that Fig. 7 of *Mitchell et al* depicts a selected item that has been highlighted. However, as explained above, there is no teaching of exactly how that is done; thus, there is no enabling teaching for the highlighting information, the viewable file and the software to highlight the position, as claimed.

(5) The Office Action points to *Mitchell et al*, col. 7, lines 42-53, for teaching to show the previous or next page of a document and to link to additional information. However,

when the prior art teaches a genus, that teaching is not the same as teaching for any particular species within that genus. *Corning Glass Works v. Sumitomo Electric U.S.A. Inc.*, 9 U.S. P.Q.2d 1962, 1970 (Fed. Cir. 1989). In the present case, the teaching of viewing a previous or next page (a genus) does not meet the claim limitation directed to a reverse-side viewable file (a species), as the original document of *Mitchell et al* could be printed on one side only of each sheet, in which case every reverse side would be blank. Similarly, the teaching of a link to some undefined "additional information" (a very broad genus) is not remotely the same as the claim limitation directed to a bill (a species).

As will be seen from the above, none of the combinations of references applied in the outstanding Office Action would have motivated a person having ordinary skill in the art to realize the present claimed invention. Therefore, the Applicants respectfully submit that the present claimed invention is patentable and request that the outstanding grounds of rejection be withdrawn.

As all grounds of objection and rejection have been addressed and overcome, entry of this Amendment and issuance of a Notice of Allowance of claims 1-84 are respectfully solicited.

Please charge any shortage of fees or credit any overpayment thereof to Deposit Account Number 18-0013. In the event that a petition for an extension of time does not accompany this response or is insufficient to render this submission timely, the Applicants herewith petition under 37 C.F.R. §1.136(a) for an extension of time for an many months as are required to render this submission timely.

Any fee due is authorized above.

Respectfully submitted,

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AMENDED CLAIMS MARKED TO SHOW CHANGES

1. (Amended) A method of providing a document in electronic form, the document having a plurality of pages, the method comprising:

(a) providing a print queue of printing data for producing the document in a printed format;

(b) converting the printing data in the print queue into a plurality of viewable files, each viewable file representing one of the pages of the document and preserving the printed format, without an intermediary step of producing hard copies of the pages;

(c) providing page-heading data representing an organization of the document;

(d) parsing the page-heading data to produce an index;

(e) providing software to view the viewable files and to search through the viewable files in accordance with the index; and

(f) providing the plurality of viewable files, the index and the software in persistent storage.

40. (Amended) A method of providing a page of a document in electronic form, the document having a plurality of pages with one or more items on each page, the page having a selected item thereon, the method comprising:

(a) providing page-heading data representing an organization of the document;

(b) parsing the page-heading data to determine a page on which the selected item is located and a position of the selected item on the page and to output highlighting information representing the position;

(c) providing a print queue of printing data for producing the document in a printed format;

(d) converting the printing data in the print queue into a viewable file representing the page in said printed format, without an intermediary step of producing a hard copy of the page;

(e) providing software to view the viewable file and to highlight the position of the selected item on the page; and

(f) [providing] storing the viewable file, the highlighting information and the software on persistent storage.

68. (Amended) A system for allowing a user to access a page of a document in electronic form, the document having a plurality of pages with one or more items on each page, the page having a selected item thereon, the system comprising:

(a) a persistent electronic storage medium [having written thereon] storing, in computer-readable form:

(i) highlighting information representing a position of the selected item on the page;

(ii) a viewable file representing the page and preserving a printed format of the page; and

(iii) software to view the viewable file and to highlight the position of the selected item on the page; and

(b) a computer for accessing the medium, running the software and allowing the

user to interact with the software.